

WHAT IS CLAIMED IS:

1. A method of push-to-talk operation, comprising:
monitoring push-to-talk usage of a mobile communication device;
5 determining a push-to-talk metric based on the push to talk usage of the
mobile communication device; and
selecting a push-to-talk session unavailability mitigation based on the
push-to-talk metric.
- 10 2. The method of push-to-talk operation according to claim 1, wherein the
session unavailability comprises one of a delay of an activation of a push-to-talk
session and an interruption of a push-to-talk session.
- 15 3. The method of push-to-talk operation according to claim 1, wherein the
session unavailability mitigation comprises a mitigation of delay of an activation of a
push-to-talk session.
- 20 4. The method of push-to-talk operation according to claim 1, wherein
the session unavailability mitigation further comprises selecting a packet switched
channel type.
- 25 5. The method of push-to-talk operation according to claim 1, wherein
the session unavailability mitigation further comprises establishing a reverse link for a
selected time period in anticipation that a reverse push-to-talk session is established.
- 30 6. The method of push-to-talk operation according to claim 1, wherein the
session unavailability mitigation comprises holding a push-to-talk connection for a
selected time period after release of a push-to-talk button in anticipation that a
subsequent push-to-talk session is established.
7. The method of push-to-talk operation according to claim 1, wherein the
session unavailability mitigation is a mitigation of interruption of a push-to-talk
channel.

8. The method of push-to-talk operation according to claim 1, wherein the session unavailability mitigation comprises selecting a circuit switched channel type.

5 9. The method of push-to-talk operation according to claim 1, wherein the session unavailability mitigation comprises prohibiting a network handover of the mobile communication device.

10 10. The method of push-to-talk operation according to claim 1, wherein the session unavailability mitigation comprises prohibiting a network handover of the mobile communication device for a selected time period.

15 11. The method of push-to-talk operation according to claim 1, wherein the push-to-talk metric is based on a measurement of a length of a delay of a push-to-talk channel activation.

20 12. The method of push-to-talk operation according to claim 1, wherein the push-to-talk metric is based on a probability of an activation of a subsequent push-to-talk session.

13. The method of push-to-talk operation according to claim 1, wherein the push-to-talk metric is based on a time measurement of the length of time of a push-to-talk channel interruption.

25 14. The method of push-to-talk operation according to claim 1, wherein the push-to-talk metric is based on a probability of a push-to-talk channel interruption.

30 15. The method of push-to-talk operation according to claim 1, wherein the push-to-talk metric is based on a time between subsequent push-to-talk sessions from the same mobile communication device.

16. The method of push-to-talk operation according to claim 1, wherein the push-to-talk metric is based on a probability of subsequent push-to-talk sessions from the same mobile communication device.

5 17. The method of push-to-talk operation according to claim 1, wherein the push-to-talk metric is based on a probability of a push-to-talk session from one mobile communication device and a subsequent push-to-talk session from a another mobile communication device on a reverse channel.

10 18. The method of push-to-talk operation according to claim 1, wherein the push-to-talk metric is based on a length of time of a push-to-talk session.

19. The method of push-to-talk operation according to claim 1, wherein the push-to-talk metric is based on a probability of handoff of the push-to-talk session.

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20. A method of push-to-talk operation for a mobile communication device, comprising:

comparing at least one push-to-talk usage metric to a push-to-talk usage metric threshold;

5 selecting a session unavailability mitigation based on comparing the push-to-talk usage metric to the push-to-talk usage metric threshold;

establishing a push-to-talk session employing the session unavailability mitigation;

10 monitoring a parameter of operation of the push-to-talk session; and
modifying the push-to-talk metric based on the parameter of operation of the push-to-talk session.

21. The method of push-to-talk operation according to claim 20, wherein the session unavailability comprises at least one of delay of an activation of a push-to-talk channel and an interruption of a push-to-talk channel.

22. The method of push-to-talk operation according to claim 20, further comprising modifying a session unavailability mitigation parameter as a function of a push-to-talk usage metric.

23. The method of push-to-talk operation according to claim 22, wherein the session unavailability mitigation parameter comprises a time to delay the end of a push-to-talk session after a user releases a push-to-talk button.

24. The method of push-to-talk operation according to claim 22, wherein the session unavailability mitigation parameter comprises a selection of a circuit switched push-to-talk session and a packet switched push-to-talk session.

25. The method of push-to-talk operation according to claim 22, wherein the session unavailability mitigation parameter comprises a duration of a reverse push-to-talk session from another mobile communication device.

26. A method of push-to-talk operation for a mobile communication device, comprising:

- loading at least one push-to-talk mitigation parameter;
- executing a push-to-talk algorithm to configure at least one push-to-talk session unavailability mitigation based on the push-to-talk mitigation parameter, the push-to-talk session unavailability mitigation controlling the operation of a push-to-talk function of the mobile communication device;
- establishing a push-to-talk session for the mobile communication device;
- monitoring at least one metric of push-to-talk operation of the mobile communication device;
- modifying a push-to-talk mitigation parameter based on the at least one metric of push-to-talk operation of the mobile communication device; and
- reconfiguring the at least one push-to-talk session unavailability mitigation based on the modified push-to-talk mitigation parameter.

27. The method of push-to-talk operation according to claim 26, wherein session unavailability comprises one of

- a delay of an activation of a push-to-talk session, and
- an interruption of a push-to-talk session.

28. The method of push-to-talk operation according to claim 26, wherein the session unavailability mitigation comprises one of

- selecting a packet switched channel type,
- establishing a reverse link for a selected time period unless a reverse push-to-talk session is established, and
- holding a push-to-talk connection for a selected time period after release of a push-to-talk button unless a subsequent push-to-talk session is established.

29. The method of push-to-talk operation according to claim 26, wherein the session unavailability mitigation comprises one of

- selecting a circuit switched channel type,

Docket No.: CS23157RA

EXPRESS MAIL NO.: EL977215356US

prohibiting a network handover of the mobile communication device,
and
prohibiting a network handover of the mobile communication device
for a selected time period.

30. An apparatus for push-to-talk operation, comprising:
a usage monitor configured to monitor push-to-talk usage of a mobile communication device;
a metric determination module configured to determine a push-to-talk
5 metric based on the push to talk usage of the mobile communication device; and
a mitigation selector configured to select a push-to-talk session unavailability mitigation based on the push-to-talk metric.

31. The apparatus for push-to-talk operation according to claim 30,
10 wherein the session unavailability mitigation comprises a mitigation of delay of an activation of a push-to-talk session.

32. The apparatus for push-to-talk operation according to claim 30,
wherein the session unavailability mitigation further comprises one of
15 selecting a packet switched channel type,
establishing a reverse link for a selected time period in anticipation that a reverse push-to-talk session is established, and
holding a push-to-talk connection for a selected time period after
release of a push-to-talk button in anticipation that a subsequent push-to-talk session
20 is established.

33. The apparatus for push-to-talk operation according to claim 30,
wherein the session unavailability mitigation is a mitigation of interruption of a push-to-talk channel.
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34. The apparatus for push-to-talk operation according to claim 30,
wherein the session unavailability mitigation comprises one of
selecting a circuit switched channel type,
prohibiting a network handover of the mobile communication device,
30 and
prohibiting a network handover of the mobile communication device for a selected time period.

35. The apparatus for push-to-talk operation according to claim 30,
wherein the push-to-talk metric is based on one of

a measurement of a length of a delay of a push-to-talk channel
activation, and

5 a probability of an activation of a subsequent push-to-talk session.

36. The apparatus for push-to-talk operation according to claim 30,
wherein the push-to-talk metric is based on one of

a time measurement of the length of time of a push-to-talk channel
10 interruption, and

a probability of a push-to-talk channel interruption.

37. The apparatus for push-to-talk operation according to claim 30,
wherein the push-to-talk metric is based on one of

15 a time between subsequent push-to-talk sessions from the same mobile
communication device, and

a probability of subsequent push-to-talk sessions from the same mobile
communication device.

20 38. The apparatus for push-to-talk operation according to claim 30,
wherein the push-to-talk metric is based on a probability of a push-to-talk session
from one mobile communication device and a subsequent push-to-talk session from a
another mobile communication device on a reverse channel.

25 39. The apparatus for push-to-talk operation according to claim 30,
wherein the push-to-talk metric is based on one of

a length of time of a push-to-talk session, and

a probability of handoff of the push-to-talk session.